

C L A I M S

What is claimed is:

1. A reflected or transmitted light scanner comprising, in combination:
 - (a) an illumination device for illuminating image material;
 - (b) a carrier for holding the image material;
 - (c) a recording device for recording the light reflected by or transmitted through the image material and for pixel by pixel conversion of the light into original image signals in several colors and a defect signal;
 - (d) a memory device for storing the image and defect signals pixel by pixel;
 - (e) a computing device for generating low-pass signals from the image signals;
 - (f) a correction device for selecting between the image signals and the low-pass signal or a combination of image signals and low-pass signal of each pixel depending upon the value of the defect signal of the respective pixel.

2. Reflected or transmitted light scanner as set forth in claim 1 wherein the illumination device comprises single color LEDs.

3. Reflected or transmitted light scanner as set forth in claim 1, wherein the illumination device comprises multi-color LED's.

4. Reflected or transmitted light scanner as set forth in claim 1, wherein the illumination device includes a white light source.

5. Reflected or transmitted light scanner as set forth in claim 3, further comprising color filter interposed between the illumination device and the recording device.

6. Reflected or transmitted light scanner as set forth in claim 2, further comprising at least one beam splitter interposed between the image material and the recording device.

7. Reflected or transmitted light scanner as set forth in claim 1, comprising a plurality of recording devices.

8. Reflected or transmitted light scanner as set forth in claim 1, comprising a computing device for the generation of the low-pass signals.

9. Reflected or transmitted light scanner as set forth in claim 8, wherein parallel signal paths are provided

for the image signal, the low-pass signal and the defect signal.

10. Reflected or transmitted light scanner as set forth in claim 9, further comprising a mixer for selecting between the image signal, the low-pass signal and a combination of image and low-pass signal.

11. An image processing method comprising the steps of:

- (a) recording original image signals representing an image from an image material;
- (b) producing a defect signal representing defects of the image material and recording device;
- (c) generating low-pass signals of the image signals;
- (d) correcting the image signals, pixel by pixel, by selecting between image signals, low-pass signals or a combination of image signals and low-pass signals, in dependence upon the defect signal as a selection criterion.

12. Image processing method as set forth in claim 11 further comprising the step of carrying out an illumination correction of the recorded signals.

13. Image processing method as set forth in claim 12, wherein the illumination correction is carried out through reconciliation with a hot light recording.

14. Image processing method as set forth in claim 12, wherein the illumination correction is carried out based on a low-pass signal of the defect signal.

15. Image processing method as set forth in claim 11, wherein the defect signal is generated through recording an additional image signal and computing these image signals together with the other image signals.

16. Image processing method as set forth in claim 11, wherein the defect signal is generated through recording of the infrared light.

17. Image processing method as set forth in claim 11, wherein the image signals and the defect signals are recorded with the same recording device.

18. Image processing method as set forth in claim 11, wherein the image signals and the defect signals are recorded with different recording devices.

19. Image processing method as set forth in claim 18, wherein the image signals and the defect signals are corrected with regard to different properties of the recording devices.

20. Image processing method as set forth in claim 11, wherein a threshold value for the defect signal is taken into account during the selection.

21. Image processing method as set forth in claim 20, wherein the low-pass signal or a combination of the image signal and the low-pass signal is employed for pixels, where the value of the defect signal exceeds the threshold value.

22. Image processing method as set forth in claim 21, wherein a corrected image signal is employed for pixels, where the value of the defect signal is below the threshold value.

23. Image processing method as set forth in claim 11, wherein an additional low-pass is used for locations in the transition area between selected low-pass signals and the image signal.

24. Image processing method as set forth in claim 11, wherein the low-pass signal is generated through sliding mean value formation.

25. Image processing method as set forth in claim 11, characterized in that low-pass signals are generated two-dimensionally.

26. Image processing method as set forth in claim 11, wherein image signals of pixels whose defect signal value exceeds a threshold value are skipped during the generation of the low-pass signals.